

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P.PURA:20BWO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/BE 03/00186	International filing date (day/month/year) 04.11.2003	Priority date (day/month/year) 04.11.2002
International Patent Classification (IPC) or both national classification and IPC A21D2/14		
Applicant PURATOS NAAMLOZE VENNOOTSCHAP		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.
 - This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:
 - I Basis of the opinion
 - II Priority
 - III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV Lack of unity of invention
 - V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI Certain documents cited
 - VII Certain defects in the international application
 - VIII Certain observations on the international application

Date of submission of the demand 28.05.2004	Date of completion of this report 04.02.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Piret-Viprey, E Telephone No. +31 70 340-1039



INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

International application No. PCT/BE 03/00186

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*):

Description, Pages

1-35 as originally filed

Claims, Numbers

1-24 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/BE 03/00186

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-24
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/BE 03/00186

The following documents (D1-D4) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

- D1: BE-A-1005825
- D2: Food Technology (01-10-1988), 42(10), 173-186
- D3: US-A-4168323
- D4: US-A-4814272

1 - The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-11 does not involve an inventive step in the sense of Article 33(3) PCT.

1.1 - D2 describes (on p.180, p.182) applications of emulsifiers: e.g. in butter, margarine, spreads, ice cream whipped toppings, bakery products, etc.

For bread, rolls and buns, their addition gives a dough that is more tolerant to mixing, shows better retention of carbon dioxide produced during leavening and - when baked - yields a product with increased volume and finer structure.

For cake batters, their addition provides a finer distribution of air cells, increases the viscosity, leads to a better volume and texture in the finished product.

The subject-matter of claims 1-6 differs from D2 in that the surface active agent is rhamnolipid.

The subject-matter of claims 1-6 consists merely in the substitution of the emulsifiers of D2 by rhamnolipid whose the property as surface active agent in food products is known from D1.

Hence no inventive step is present in the subject-matter of claims 1-6, cf. the Guidelines Chapter 13.14 (a) (iv).

1.2 - D3 indicates (in col.3, l.57-64) compounds used as surfactants (in food, e.g. bakery products) which can be used in applications requiring antimicrobial activity.

The subject-matter of claim 7 differs from D3 in that the surface active agent is rhamnolipid.

The subject-matter of claim 7 consists merely in the substitution of the surfactants of D3 by rhamnolipid whose the property as surface active agent in bakery products is known from D1.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/BE 03/00186

Hence no inventive step is present in the subject-matter of claim 7, cf. the Guidelines Chapter 13.14 (a) (iv).

1.3 - Dependent claims 8-11 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step.

- In claim 8 a slight constructional change in the method of claims 1-7 is defined which comes within the scope of the customary practice followed by persons skilled in the art.

- Features of claims 9 and 11 are described in D1 as providing the same advantages as in the present application.

- Features of claim 10: the addition of other ingredients (selected from the group of alpha-amylases, potassium bromate, xylanases, lipases, ...etc.) is a matter of normal procedure in baking. Their inclusion would therefore be an obvious possibility for the skilled person in order to solve the problem posed.

2 - The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 12-22 does not involve an inventive step in the sense of Article 33(3) PCT.

2.1 - D1 describes on p.1, I.1-11 and claim 1 a surface active composition comprising rhamnolipid used in food. Passage on p.9, I.27-32 indicates that this surface active agent can be used in bakery products.

The subject-matter of claims 12-14 differs from D1 in that :

- the concentration of rhamnolipids is indicated

These features are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

- the bread improver comprises other usual active ingredients

The addition of other ingredients is a matter of normal procedure in baking. Their inclusion would therefore be an obvious possibility for the skilled person in order to solve the problem posed.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/BE 03/00186

The subject-matter of claims 15-19 differs from D1 in that :

- the other improver component is specified: lipase (lipofan F) or gluten or ADA. These ingredients are usual in baking. Their inclusion would therefore be an obvious possibility for the skilled person in order to solve the problem posed.

Hence no inventive step is present in the subject-matter of claims 12-19.

2.2 - Dependent claims 20-22 does not appear to contain any additional features which, in combination with the features of any claim to which it refers, meet the requirements of the PCT with respect to inventive step.

In claims 20-22 a slight constructional change in the bread improver of claim 12 is suggested which comes within the scope of the customary practice followed by persons skilled in the art (see D4).

D4 describes in col.2, l.57-col. 3, l.3 and claim 1 a process for the production of rhamnolipids by culturing *Pseudomonas* sp. DSM 2874.

3 - The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 23 and 24 does not involve an inventive step in the sense of Article 33(3) PCT.

3.1 - Claim 23 differs from D1 in that specific *Pseudomonas* strains are used.

Such a selection can only be regarded as inventive, if the rhamnolipid obtained presents unexpected effects or properties in relation to the rest of the range. However, no such effects or properties are indicated in the application.

Hence, no inventive step is present in the subject-matter of claim 23.

3.2 -Dependent claim 24 does not contain any features which, in combination with the features of any claim to which it refers, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:

The subject-matter of claim 24 consists in the selection of a type of rhamnolipid. Such a selection can only be regarded as inventive, if the rhamnolipid obtained presents unexpected effects or properties in relation to the rest of the range.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/BE 03/00186

However, no such effects or properties are indicated in the application.

Hence, no inventive step is present in the subject-matter of claim 24.

4 - The applicant is requested to file new claims which take account of the above comments.

5 - Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D4 is not mentioned in the description, nor are these documents identified therein.